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CHARACTER OF EXANTHEMATOUS TYPHUS IN KWANTUNG PENINSULA

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Prior to the liberation of Manchuria by the Soviet Army, the Medical Service of our units had no exact data on epidemic diseases, and in particular on exanthematous typhus in China and Japan.

In September 1945, the Sanitary Corps of the US Army Medical Department stated: "Exanthematous typhus seldom occurs in Japan, but is exceptionally common in Korea, Manchuria, and North China. Exanthematous typhus is found in South China and in southeastern Asia and is probably spread by fleas in the majority of cases." (Bulletin of the US Army Medical Department, No 3, Sep 1945)

Medical and epidemiological surveys in cities and villages of the Kwantung Peninsula after the Soviet Army occupation showed that the Chinese are 100 percent pediculous. The population lives very poorly and in congested conditions. A patriarchal family of 10-20 people lives in a hut covering an area of 15-20 square meters.

The clothing, with rare exceptions, is ragged and is neither taken off nor laundered from the moment it is put on. There are no beds in the huts and the outer clothing is spread on the floor to be slept on.

There are no specific hospitals for communicable diseases and the Chinese population has no medical help.

The Japanese population consists of colonizers, traders, and industrialists, living in well-built houses under satisfactory sanitary conditions.

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However, it is impossible to locate anyone with severe infection in the Chinese area for the local population is afraid of the Japanese overlords, and their cruel treatment of severe cases, and willfully hide any infection.

Exanthematous and relapsing typhus rage in the Kwantung Peninsula every year, but no attempt is made to control these diseases due to lack of doctors and also because those present are occupied with their private practices and have no interest in eradicating contagious diseases.

According to data of the Dal'niy Health Department, cases of exanthematous typhus officially registered in the city were as follows: 1943 - 2,940 cases, 1944 - 2,502 cases, 1945, - 2,571 cases, and in 1946 - 8,320 cases. In 1946, the epidemic of exanthematous typhus reached a maximum in September and October.

The personnel of our units in the Kwantung Peninsula were completely free from exanthematous typhus. Considering the intense epidemic situation, the military authorities established a regime enforcing a maximum limitation of contact of the military personnel with the local population. Nevertheless, it was impossible to completely avoid contact. Military personnel frequently used the services of Chinese barbers.

Those quartered outside the unit compound were compelled to use local means of transportation, streetcars and trains, which were crowded with Chinese. The local population attended the motion picture theatres. Due to these conditions some cases of exanthematous typhus began to appear. The first cases appeared in August, continued to appear through September and October, but stopped completely in November.

Three locales -- the city of Dal'niy and points B and C, all having direct connections with each other -- were the focal points of infection of the disease.

Personnel and members of military families in those locales were not given specific prophylactic treatment against exanthematous typhus.

The physical condition of the patients prior to becoming ill was good. Some of the patients generally denied that lice had been present; some admitted that after a ride on a streetcar or a visit to a Chinese barber or market, they found lice on their underwear or in their beds. When asked if they had ever seen a flea on them while they were in the Kwantung Peninsula, all answered negatively.

The cases of exanthematous typhus which we studied belong in the generally accepted classifications, based on the quantitative and qualitative analyses of their outstanding symptoms. The condition was either slight or mild in the majority of the patients; three were severe. Because of the absence of sharply defined "clinical" symptoms of exanthematous typhus and some moderations and obliterations of the "leading" symptoms in a significant number of patients, doctors of the units made some erroneous diagnoses in the first cases of this disease. This gave us occasion to speak of the "atypicalness" of the course of epidemic exanthematous typhus and the possibility of its presence in a given case of Manchurian rat exanthematous typhus or other rickettsiosis.

The following characteristic clinical symptoms were noted: shorter period of pyretic condition; a considerable percentage of the patients (38) had fever for 8-10 days; the temperature curve remained at 38.5-39.7 degrees; frequently there were morning remissions up to subfebrile figures. In the majority of cases the temperature dropped sharply, leaving a temperature

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limit for 5-6 days.

In 78 percent of the patients, the rash had a predominatly polymorphic and roseolus character. However, a roseolus-papule character was frequent, and in 10 percent of the patients, the rash was of a petechial nature. The rash broke out on the fifth - seventh day after the onset of the disease; in some cases the rash completely covered the surface of the body. There was no rash in 22 percent of the cases.

The Weil-Felix reaction was positive in a dilution of 1:200 - 1:400 to 1:3,200. In four cases the initial Weil-Felix reactions were negative although they indicated positive clinical symptoms confirming exanthematous typhus. The blood picture of our patients did not completely fit into the pattern of the characteristic degeneration of the leukocytes - severe leukocytosis, neutrophilia with a shift to the left, and aneosinophilia. The leukocyte count varied quite widely: for example, leukopenia (from 3,000 to 4,000 in one cu mm), the normal leukocyte count, and moderate leukocytosis with a maximum count of 13,000. Severe neutrophilia was observed only once; the monocyte count was within the normal limits. Aneosinophilia was noticed in half of the cases. The sedimentation rate, as a rule, increased up to the limits of from 24 to 60 mm per hour; it was normal in only four cases.

The more common subjective complaints were: general debility, anmoliation, malaise, headache, hypertrophy and hyperemia of the face, and sclerotitis. Splenomegal was present in 20 percent of the cases. A degeneration in the cardiovascular system was indicated in a moderate degree: dullness of the heart tones, slight hypotonia (within the limits of 105/50 and 110/55), pulse 90 - 105 per minute; in one case a systolic palpitation and arrhythmia were audible in the heart area.

One case was diagnosed as bronchial pneumonia and upon admission into the hospital was found to be a pulmonary case; only a positive Weil-Felix reaction excluded bronchial pneumonia as the primary disease. In a number of cases there was a slight positive degeneration in the kidneys - albumin in the urine was up to 0.033 percent and single erythrocyte count; in one patient dysuria was observed during the recovery period.

There were no complications during the course of exanthematous typhus. The exceptions were one case of bronchial pneumonia and one case of meningoencephalitis (the latter case died). The comparatively light course of exanthematous typhus cases under our observation was apparently due to the youth of the patients (all were from 18 to 36 years old) and healthy diets.

CONCLUSIONS

1. In spite of the mild course of exanthematous typhus, the outstanding basic symptoms, such as headache, fever, characteristic exanthema, and a positive Weil-Felix reaction at high dilution, make diagnosis of the described cases of epidemic exanthematous typhus and differentiation from other forms of Rickettsia possible.

2. The cases of exanthematous typhus observed in the Kwantung Peninsula were mild and moderately severe types judging from their clinical course.

3. The considerable number of exanthematous typhus cases (22 percent) who apparently completed their progress without a rash could be due to the fact that doctors overlooked those with slight symptoms and quickly disappearing

rash which occur in mild cases. This might have been true especially for those cases who were not admitted into the communicable diseases hospital but were isolated in a unit dispensary where the doctor had no experience in the diagnosis of contagious disease.

4. Leukocytosis does not necessarily accompany exanthematous typhus, as a considerable pertentage of the cases transpired with a normal leukocyte count or moderate leukocytosis, not surpassing 12-13,000.

5. Doctors must remember that outbreaks of exanthematous typhus can occur at any time of the year, and whenever an exanthematous typhus epidemic situation is created.

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